federal register

MONDAY, JANUARY 31, 1977

PART XII

DEPARTMENT OF TRANSPORTATION

Coast Guard

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NAVIGATION SAFETY AND VESSEL INSPECTION REGULATIONS

Title 33—Navigation and Navigable Waters

CHAPTER I—COAST GUARD, DEPARTMENT OF TRANSPORTATION

[CGD 74–77]

PART 164—NAVIGATION SAFETY REGULATIONS

Navigation Procedures, Testing, and Equipment Requirements

The purpose of these amendments to Title 33 of the Code of Federal Regulations is to add a new Part 164 prescribing rules for navigation procedures, preliminary tests, and minimum equipment for vessels of 1600 gross tons or more when operating on the navigable waters of the United States, except the Panama Canal and St. Lawrence Seaway.

On page 18766 of the FEDERAL REGISTER of May 6, 1976, the Coast Guard published a notice of proposed rulemaking for these amendments. Operation of vessels that are as large as 1600 gross tons or more within coastal and harbor regions, where 80 percent of vessel casualties occur, regularly creates hazardous conditions with risks to persons, property, and the environment, especially if proper navigation procedures are not followed, essential vessel equipment is not operating properly, or a vessel does not have necessary equipment. As discussed in the preamble of the proposal, most vessels follow proper procedures, have the necessary equipment, and keep that equipment operating properly. It is those vessels that do not follow proper procedures or do not have properly operating, necessary equipment that aggravate the hazard. The hazard is compounded not only by the recrurring problems of reduced visibility, adverse weather, and vessel congestion, but by the increasing speed and size of vessels, especially when carrying hazardous cargoes or other cargoes that can adversely affect the environment. The number of vessels involved in reported collisions, rammings, and groundings is increasing. Vessel casualties, such as those involving the *Torrey Canyon*, the *Tamano*, the *Oregon Standard*, and certain of those that have occurred in December of 1976 and January of 1977, might not have occurred if proper navigation procedures had been followed or if the vessels had had properly operating essential equipment. The purpose of these amendments is to prevent future casualties by requiring, for those larger vessels, that proper navigation procedures are followed, that necessary equipment is on board, and that all essential equipment is operating when those vessels are navigating in the coastal waters and harbors of the United States.

The public was invited to comment in writing on the proposed rules from May 6, 1976, through August 6, 1976, and at public hearings in Washington, D.C. on June 11, 1976, and in San Francisco, California on June 17, 1976. A discussion of comments received and changes in the proposed rules follows.

General comments: Fifteen commenters suggested that more and better training, not regulation, is needed. More and better training is desirable and the Coast Guard is considering many ways to help improve it; however, that training would not preclude the need for the proper navigational procedures and vessel equipment that these amendments address. Furthermore, these rules do apply to the large number of foreign flag vessels operating within our navigable waters, while licensing and certification requirements, including training, promulgated by the Coast Guard now do not. Five commenters recommended increasing the difficulty of license exams or establishing a higher license, such as the United Kingdom's "Extra Master". The Coast Guard is considering these recommendations for possible future action.

Ten commenters stated that the proposal includes nothing that is not already addressed in statute or regulation. The rules in this new part require navigation procedures that are not included in the statutory "rules of the road." The rules also require equipment for all U.S. and foreign vessels of 1600 gross tons or more that is not required under statute or other regulations for all those vessels and under all the operating conditions to which this part applies. Some of the proposed rules, such as those for lights, day signals, and fog signals, were duplicative and have not been included in these final rules.

One commenter stated that the proposed operating procedures would restrict a master's use of good judgment. The operating procedures in these amendments are safe operating procedures that most masters follow. If these rules are restrictive, the restriction applies to those few masters who in the past have not followed these minimally safe practices.

As one commenter observed, most vessels that operate exclusively upon rivers will not be affected by these rules because they are smaller than 1600 gross tons.

One commenter suggested that the Coast Guard should require, instead of the rules in this part, that shipping companies issue an operating manual. Although an operating manual consistent with these rules might be desirable, a rule requiring it could be applicable only to U.S. companies and would not be as comprehensive as these amendments, especially the equipment requirements, nor have the force of regulations.

Several commenters stated that some of the rules were vague. Some of the rules do not include detailed standards because all of the practical variables are not quantifiable. Those rules that could be more detailed have been changed, such as a detailed description of the maneuvering information that is required under paragraph (g) of § 164.35, paragraph (f) of the proposal.

Section 164.01 Applicability. Nine commenters requested a definition of "navigable waters of the United States." "Navigable waters of the United States" is defined in 33 CFR 2.05–25.

Applicability to tug and barge combinations that have large aggregate tonnages was suggested by seven commenters, to tugs and towing vessels by five commenters, to all vessels by one commenter, and to small passenger vessels by one commenter. These regulations are not appropriate for all of the vessels in each of those classifications. The Coast Guard is considering regulations for these vessels that would be the subject of separate rulemaking actions.

Section 164.11 Navigation underway: general. Ten commenters stated that the proposed operating procedures would create a heavy workload that would require additional manning. Changes in this section, which are discussed later in this preamble, should eliminate the need for any unnecessary manning in addition to that normally required upon vessels to which these rules apply.

Two commenters suggested that the rules be published as a code of navigational practices and not as mandatory regulations. As stated at the beginning of this preamble, the navigation procedures in these rules are followed by most masters. The Coast Guard is making them mandatory, instead of publishing a voluntary code, to reach those who now do not follow good navigation procedures.

One commenter stated that the regulation requires the master or person in charge to be guarantor of compliance and that he could not always, in his capacity, ensure compliance. The Coast Guard agrees that this would be especially true for equipment requirements. Therefore, the final rule is changed to include the "owner" of the vessel as an ensurer of compliance. Although this change is included in these amendments, any interested person may submit written comments on this particular change to the Commandant (G–CMC/81), U.S. Coast Guard, Washington, D.C. 20590. Each person submitting a comment should include his name, address, identify the notice (CGD 74–77), and give reasons in support of his comments. The Coast Guard will consider comments received before May 2, 1977 and may change the requirement in light of them. Copies of the comments received will be available for examination in Room 8117, Department of Transportation, Nassif Building, 400 Seventh Street, S.W., Washington, D.C.

Section 164.11(a). Six commenters requested a definition of "adequate number" of persons required to constantly man the wheelhouse to direct and control the movement of the vessel and fix the vessel's position. The intent of the paragraph is that the wheelhouse be "constantly manned" and that those functions be performed. Because of the variety of vessels to which this part applies, quantitative definition of "adequate number" is not practical. Therefore, to avoid confusion, the phrase "adequate number" is deleted.

Section 164.11(b). This paragraph requires the owner, master, or person in charge to ensure that persons performing the duties required under paragraph (a) be competent. Six commenters stated that the Coast Guard is responsible for ensuring competency through licensing and certification. "Competent" means more than qualified through licensing and certification. It also means physical

and mental capacity to do the job at the time the person assumes the duty.

Section 164.11(c) in the proposal. This paragraph would have required the vessel's position to be fixed every 15 minutes. After further consideration, the Coast Guard has determined that this would not be practicable in all navigable waters. Therefore, it is not included in this final rule.

Section 164.11(c). This was paragraph (d) of the proposal which would have required the plotting of the vessel's position at each fix and the revised track on a chart of the area and that the person directing the movement of the vessel is informed of the vessel's position. Ten commenters stated that compliance would not be possible at present manning levels. Ten more commenters stated that the requirement is superfluous on rivers and in channels. Four others said this plotting would distract watch officers who are performing other duties. It is necessary for safety that the appropriate vessel's officers be aware of the vessel's position to supplement the functioning of a pilot; however, the Coast Guard has determined that the plotting of the track is unnecessarily burdensome in consideration of practical manning levels and the necessities of other duties. Therefore, the track plotting requirement is not included in the final rule.

Section 164.11(d). This was paragraph (e) in the proposal. This paragraph does not require specific navigation equipment, but requires the use of the electronic and other navigational equipment that is on a vessel plus geographic reference points and hydrographic contours for fixing positions. It should be read with the next paragraph which prohibits sole reliance on buoys.

Section 164.11(e). This was paragraph (f) in the proposal. Eight commenters suggested that buoys should be used to fix a position if no other aids are available. Buoys may be used to establish an estimated position if no other aids are available; however, they cannot be relied upon to establish a fix. Four commenters suggested that the Coast Guard spend more money on buoy maintenance. Three more stated that several buoys could be used to establish a fix. As stated in the note to this paragraph (e), strong currents, heavy seas, ice, and collisions with vessels can move, sink, or set adrift a buoy. "Spending more money" would not solve these problems. It is also not likely under these circumstances that several buoys could be used to establish a fix, but could only be used to establish an estimated position. The charted position of a buoy is approximate.

Section 164.11(g) *in the proposal.* This proposed requirement, to maintain a proper lookout, is included in the Federal "rules of the road", which are applicable to all vessels. Since it is therefore redundant, it is not included in the final rule.

Section 164.11(f). This was paragraph (h) in the proposal. Four commenters stated that the requirement to evaluate each closing radar contact conflicts with the radar Annex to the International Regulations for Preventing Collisions at Sea, 1960. That Annex cautions against reliance solely upon "scanty information" such as radar contacts and states what actions should be taken under certain circumstances. Paragraph (f) of these rules requires that each closing radar contact be evaluated, but does not require sole reliance upon radar and does not suggest what action should be taken once a contact is evaluated. One commenter stated that the rule was "pointless" in rivers and channels. The rule does not require plotting of course, speed, and closest point of approach of closing visual or radar contacts, which might not be effective in rivers and channels. The rule does require that the person directing the vessel's movement be aware of the actions of those contacts and the evaluation of how they may affect the navigation of that person's vessel.

Section 164.11 (g) and (h). These were paragraph (i) and (j) in the proposal. These rules require that rudder, engine speed, and direction orders be executed as given. One commenter stated that these rules would not prevent errors. Another commenter suggested that the requirement should be that the person directing the vessel's movement have a "positive indication" of proper execution. The intent of the rule is that the person directing the vessel's movement does what is necessary to ensure that these orders are being executed correctly, such as watching the direction the helmsman turns the wheel, the rudder angle indicator, and the engine order telegraph, so that person can respond immediately to correct any error being made. Some "positive indications," such as the movement of the vessel's head or change in vessel speed or engine vibrations, may not occur in time for correction of an error, especially on "very large" vessels.

One commenter suggested that the engine speed and direction orders be given using terms such as "ahead one-third" instead of terms such as "slow ahead," because there is less chance that the orders would be heard incorrectly. Application to foreign vessels to which this part applies of a rule requiring the use of this specific terminology would not be practicable.

Section 164.11(i). This was paragraph (k) in the proposal. One commenter stated the requirement that magnetic variation and deviation be known and correctly applied was "ridiculous" because the deviation changes can be so frequent. A survey of 300 randomly selected vessels showed that the deviation tables on many of these vessels were so out of date that the tables were of little use. The intent of this requirement is that a person directing the movement of a vessel be aware of the vessel's deviation. If that person has reasonably up to date tables or acts to verify deviation, such as by gyrocompass or celestial comparison, the requirement of this paragraph would be met and the safe navigation of the vessel enhanced.

Section 164.11(j). This was paragraph (l) in the proposal which would have required a qualified person to be at the steering position at all times. Six commenters stated that requiring the person to be at the steering position when a vessel was on automatic pilot was unreasonable. In light of this comment, the final rule requires only that the person be in the wheelhouse at all times. "Qualified person" has been changed to "competent" for the same reasons discussed earlier in this preamble for paragraph (a) of this section.

Section 164.11(k). This was paragraph (m) in the proposal. This paragraph requires a master and pilot conference to familiarize the pilot with the vessel because, although a pilot may be familiar with the type of vessel, each vessel has its own characteristics that often change with draft, trim, and speed. Furthermore, the pilot may not be familiar with the bridge layout and equipment and it would be too late to learn these things when risk of collision exists. Two commenters thought that the requirement was too vague. The paragraph is a clear expression of the intent of the requirement as just discussed. Further detail would be impractical because of the great variety of vessels to which this part applies. Three commenters asked about possible language barrier problems. If the pilot is unable to communicate somehow with the master, the Captain of the Port should be contacted under § 164.53 of this new part.

Paragraph (m)(2) in the proposal, which would have required the pilot to inform the master of abnormal characteristics of the area, is not included in this final rule. It may be the subject of a separate rulemaking at another time.

Section 164.11(l). This was paragraph (n) in the proposal. This paragraph requires the person directing the movement of the vessel to know the current velocity and direction for the area. One commenter stated that river current predictions are often inaccurate. The intent of the paragraph is that the person directing the movement of the vessel know as much about current velocity and direction as is possible.

Section 164.11(m). This was paragraph (o) in the proposal. One commenter stated that the predicted set and drift are unpredictable upon rivers. The intent of this paragraph is that the person directing the movement of the vessel use whatever data on current that is available to predict set and drift.

Section 164.11(n). This was paragraph (p) in the proposal. The words "tidal value" are replaced by "tidal state," as used in tide tables, to clarify the intent of the paragraph.

Section 164.11(q) in the proposal. This was to be a requirement for minimum net bottom clearance. It is not included in this final rule, but is to be the subject of a future rulemaking action.

Section 164.11(o). This was paragraph (r) in the proposal. It requires that the vessel's anchors be ready for letting go. Seven commenters suggested that application of the rule be limited to waters that are shallow enough for anchor use. Trying to narrowly define areas where the rule should apply would be impractical.

The intent of the rule is that the anchor be ready for use if necessary, such as when a vessel sheers suddenly into an area where it may ground. Nor should the rule be limited to confined or congested waters, as three commenters suggested, for the same reason. Six persons asked what "ready for letting go" means. "Ready for letting go" means that stoppers, covers, jackasses, and similar items are removed from the ground tackle and that the chain be rigged for quick release. It does not mean that the anchor should be walked out.

Section 164.11 (s) and (t) in the proposal. These proposed requirements were for the proper display of lights and day signals and the sounding of proper fog signals. These are included under the Federal "rules of the road," which are applicable to all vessels, and are therefore not included in this final rule.

Section 164.11(p). This was paragraph (u) in the proposal. Five commenters suggested that the Coast Guard coordinate this rule for setting a vessel's speed with the new Rule 6 of the International Regulations for Preventing Collisions at Sea. 1972. The Coast Guard has done so and the rules are consistent. Since Rule 6 applies to international waters, it is supplemented by this paragraph (p), which is more appropriate for the coastal and inland waters to which it applies.

Section 164.11(q). This was paragraph (v) in the proposal. The proposed paragraph, in part, required that the results of the tests required under § 164.25 be recorded in the vessel's "pilot house log." Two commenters suggested that the entry be in the "deck log." The intent of the rule is simply that the results be recorded in an official log of the vessel. To avoid confusion, the words "pilot house" are not included in the final rule.

Section 164.11(r). This was paragraph (w) in the proposal. This paragraph is the requirement that equipment required by this new part be maintained in operable condition. Four commenters suggested a "best effort" criterion. Two others stated that compliance is not always possible because of lack of parts and available technical ability. One commenter stated that radar, gyro, or depth finder malfunction should not be a reason to delay departure from a port where there are inadequate repair facilities. Notwithstanding these considerations, the intent of the rule is that this necessary equipment should be operating.

Section 164.15 Navigation underway: confined or congested waters and *Section 164.16 List of confined or congested waters.* These are special rules for the hazards of navigation in confined or congested waters. The substantive rules in § 164.15 are promulgated in this final rule as discussed in this preamble. The practical application of § 164.15, however, will not occur until specific geographic areas in which they would apply are included under § 164.16. The definition of "confined or congested waters," as requested by nine commenters, would be implicit in the naming of those waters. Those waters would be particularly hazardous because of restricted maneuvering room or a high volume of vessel traffic. The Coast Guard will conduct separate rulemaking actions for the listing of specific waters under § 164.16. A discussion of the rules in § 164.15 follows.

Section 164.15(a). The proposed rule stated that propulsion machinery is to be in the "maneuvering mode". One commenter requested a definition of "manuevering mode." To clarify the intent of the requirement, the final rule requires propulsion machinery to be ready to "respond immediately through its full operating range."

Section 164.15(b). This paragraph requires that the engine room be manned to operate the propulsion machinery as required under paragraph (a) of the section. Four commenters suggested that vessels that are designed for "unmanned" engine rooms be exempted. The intent of the paragraph is to require no more manning than is necessary to meet paragraph (a) of this section. "Engine room" also includes the main engine control station, even if it is not physically in the "engine room."

Section 164.15(c). This paragraph requires the availability of persons to anchor the vessel rapidly in an emergency. One commenter suggested that vessels with remote control of anchors be exempted. If there is remote control of anchors, the requirement is met by having persons at the remote control.

Section 164.15 (d) and (e) in the proposal. Paragraph (d) would have required the manning of the steering engine room to shift steering control from the pilot house to the steering engine room. Seventeen commenters stated that the requirement would be ineffective because a steering casualty cannot be so remedied quickly enough. In light of these comments, the requirement is not included in these final rules but will be considered further. Because of this, paragraph (e) of the proposal, which would have required communication between the pilot house and the person manning the steering engine room, is also deleted.

Section 164.15(d). This was paragraph (f) in the proposal. This paragraph prohibits the use of the automatic pilot device in confined or congested waters. Two commenters stated that automatic pilot is better than manual steering in certain situations. One suggested that the requirement be for use of the safest steering mode for a particular situation. One commenter stated that component failure in an auto pilot often causes a sudden sheer and that in confined or congested waters, there may be no time to shift. Furthermore, he stated that many companies have standing orders to use hand steering in "tight quarters." The last commenter's statements are consistent with the intent of the rule and the concept of the confined or congested waters in which it would apply. The paragraph is included in this final rule.

Section 164.17 of the proposal. The proposal stated that a rule for tug assistance in confined waters would be developed. This is to be the subject of a future rulemaking action.

Section 164.19 Requirements for vessels at anchor. To be chronologically consistent, paragraphs (a) and (b) of the proposal are interchanged in this final rule.

Section 164.19(a). This was paragraph (b) in the proposal. This paragraph requires the maintenance of a proper anchor watch. The proposed wording was "lookout". "Anchor watch" replaces it in this final rule in agreement with a comment, which stated that "anchor watch" was more appropriate.

Section 164.19(c). This paragraph combines paragraphs (c) and (d) in the notice. One commenter stated that veering chain or dropping a second anchor may solve the problem and that if repairs are being made to the vessel at anchor, it may not be able to get underway. Depending upon the severity of conditions, veering chain or dropping a second anchor may solve an anchor dragging problem; however, if conditions warrant, the vessel should be ready for getting underway if the other actions do not solve the problem. If the vessel has no propulsion, standby tug assistance may be appropriate.

Section 164.19 (e) and (f) in the proposal. These paragraphs would have required the display of proper light and day signals and sounding fog signals while at anchor. Since these are already required under the Federal "rules of the road", which are applicable to all vessels, they are not included in this final rule.

Section 164.23 in the proposal. This section would have required notification to the Captain of the Port or the Vessel Traffic Service of an area before getting underway under conditions that may abnormally affect vessel movement. There were 27 comments about the impracticality of this requirement. After consideration of these comments, the Coast Guard has determined that the practical value of this requirement is outweighed by its impractical aspects and it is not included in this final rule.

Section 164.25 Tests before entering or getting underway. Five commenters stated that the equipment tests required by this section are normal practice on "well-run" vessels and one commenter stated that the requirements are already included in parts of 46 CFR. The intent of the section is that these tests also be made on all those vessels to which this new part applies and not just the vessels to which the requirements in 46 CFR apply. 46 CFR is being amended to be consistent with this new rule. One commenter stated that compliance with this requirement is "impossible" for short inland or coastal voyages. These tests are as necessary for vessels of 1,600 or more gross tons that make short inland or coastal voyages, such as between Philadelphia and Baltimore, as they are for vessels that make longer voyages. If this seems impractical for a particular vessel, the Captain of the Port should be contacted under the requirements of § 164.55 of this new part.

Section 164.25(a). This paragraph requires the testing of primary and secondary steering gear. One commenter stated that careful inspection by a chief

engineer or other qualified person would be sufficient. Visual inspection does not always disclose whether the system will fail and is less reliable than actual testing. One commenter suggested that testing a "trick wheel" is not practical while a vessel is underway. If this system is the only backup steering system, the test is necessary. Vessels to which this new part applies usually have at least two means of steering. To enhance safe navigation, both should be tested to ensure that they are operable.

Section 164.25(b). This paragraph requires the testing of internal vessel control communications and vessel control alarms. One commenter suggested that this apply only when necessary for safe maneuvering. These systems should be ready for all circumstances, including the unforeseen, for the purposes of safe navigation. One commenter stated that "all" of these systems on a highly automated vessel is a large number. Nevertheless, it is necessary for the purposes of safe navigation that these systems operate properly.

Section 164.25(c). The proposed paragraph (c) required the testing of "each emergency generator for at least fifteen minutes." Four commenters stated that once a week is sufficient. These are critical systems and whether or not they are working should be known at the time of actual vessel operation. Since the intent of the section is that there be a second working electrical power source, the final rule allows a standby or emergency generator. One commenter correctly suggested that, instead of a fifteen minute requirement, the test be as long as necessary to show proper functioning, including steady state temperature and pressure readings. The final wording has been changed accordingly.

Section 164.25(d). One commenter suggested that this requirement for the testing of storage batteries for emergency lighting and power systems to vessel control and propulsion machinery spaces not apply to vessels for which there is a regular testing program. The necessity of testing these critical systems at the time of entering or getting underway in the navigable waters of the United States is as discussed for the systems required under paragraphs (a) through (c) of this section.

Section 164.25(e). This paragraph requires the testing of main propulsion machinery, ahead and astern. Five commenters stated that backing engines in coastal waters might be dangerous. The Coast Guard assumes that reasonable masters would not do this test where it might be dangerous, such as in close proximity to other vessels. Two commenters suggested that the machinery be required to be tested only as is necessary to show that it can respond. That would meet the paragraph's requirement. One commenter suggested that the backing test of the engines be made when the vessel slows to pick up a pilot. This machinery must be tested, both ahead and astern, before entering the navigable waters of the United States, which is consistent with the intent of all the regulations in this new part as discussed in the beginning of this preamble.

Section 164.30 Charts, publications, and equipment: general. This section prohibits the operation of a vessel by any person unless the vessel has the charts, publications, and equipment as required by §§ 164.33 through 164.37 of this new part. Six commenters suggested a "due diligence" criterion for this requirement. That concept is reasonably included under the charts and publication requirements in § 164.33 as this section is rewritten in this final rule.

Section 164.33 Charts and publications. Seven commenters stated that the requirement to have the "most recently published" charts under paragraph (a)(1) is unreasonable under the present distribution system. Three commenters stated the same for the requirement under paragraph (a)(2) to have the "current" copy of the listed publications. Accordingly, the requirements are changed to require the "most recently published and available" charts and the "most recent, available * * *" copy of the publications.

Section 164.35 Equipment: all vessels. Seventeen commenters suggested that there be a requirement for "collision avoidance" device. Five commenters suggested a Loran C requirement for "large" vessels. Both will be the subject of a rulemaking action in the near future. Two commenters suggested that radio direction finding equipment be required. This equipment is now required for certain U.S. vessels. The Coast Guard is considering requiring it for all vessels of 1600 or more gross tons operating on the navigable waters of the United States.

Four commenters suggested that the burden of compliance for these equipment requirements be affirmatively placed upon vessel owners. Under the requirement of § 164.30 of this new part, if the owner, through his action or general policy, can reasonably be expected to ensure that the requirements of this equipment section are met, then the burden of compliance would be upon the owner.

Section 164.35(a). This paragraph requires a marine radar system for surface navigation. Four commenters suggested the requirement of gyro stabilization with north up capability. Three commenters suggested the requirement of reflection plotters. One comment suggested the requirement of a minimum 16 inch Plan Position Indicator (PPI) scope with moveable range rings. The Coast Guard has determined that these types of specifications are unnecessary at this time and that the usual radars that are available are sufficient for basic navigational safety. If further experience shows that more specification is necessary, the Coast Guard would conduct appropriate rulemaking actions.

Section 164.35(b). This paragraph requires an illuminated magnetic steering compass. Two commenters stated that many inland vessels do not use a compass. As stated earlier in this preamble, this part does not apply to most inland vessels because they are not 1600 gross tons or more. If an inland vessel is of 1600 gross tons or more and the compass is unnecessary for that vessel, a deviation may be requested under the requirements of § 164.55 of this new part.

Section 164.35(c). This paragraph requires a current magnetic compass deviation table or graph or compass comparison record for the steering compass. The comments on this requirement are discussed earlier in this preamble for § 164.11(i).

Section 164.35 (d) and (e). These were paragraph (d) in the proposal. For clarity, the two requirements, that there be a gyrocompass and that it or a repeater be illuminated and be at the main steering stand, are divided into two paragraphs.

Section 164.35(g). This was paragraph (f) in the proposal. It requires the display of maneuvering information on a fact sheet in the wheelhouse. To be consistent with a similar requirement in 46 CFR 35.20–40 and to clarify the intent of the requirement, the specific information required is stated in the paragraph in this final rule.

Section 164.35(h). This was paragraph (g) in the proposal. It requires an echo sounding device. Two commenters stated that the requirement was unnecessary in pilot waters and two other commenters stated that it was unnecessary for the Great Lakes. It is as important to know the depth of water in these waters as it is in any others. The requirement is unchanged.

Section 164.35(i). This was paragraph (h) in the proposal. It requires a device that can continuously record the depth readings of a vessel's echo sounding device. Nine commenters stated that the device serves no navigational purpose. The recorder is useful for navigational purposes as a valuable positioning device. One commenter stated that the requirement conflicted with IMCO Resolution A.224, which recommends a 15 minute recording capability. The requirement is that the device be one that can record continuously and not a requirement that it run continuously.

Section 164.35(j) in the proposal. This paragraph would have required an illuminated device that displays vessel speed, such as a pitometer log, revolutions-per-minute counter with speed equivalent table, or a direct read out device, such as a doppler indicator. Two commenters stated that such a device would not be useful on rivers. One commenter suggested that direct reading indicators, such as dopplers, be required on "large" vessels. After consideration of these comments and the facts that pitometer log swords would not be extended in shallow waters and revolutions-per-minute counters and speed equivalent tables are only valid in a steady state situation, the Coast Guard has determined that the requirement is insufficient as proposed. Because of the potential value of a direct speed indicating device, the Coast Guard is considering it as the subject of a future rulemaking action after more study; however, the requirement is not included in this final rule.

Section 164.37 in the proposal. This proposed section would have required two marine radar systems on vessels of 10,000 or more gross tons. As stated in the discussion of § 164.35 in this preamble, "collision avoidance" devices for vessels of 10,000 or more gross tons will be the subject of a rulemaking action in the near future. Since a radar system is a component part of some "collision avoidance" devices, this proposed requirement for a second radar is not included in this final rule; however, if after rulemaking procedures a requirement for collision avoidance devices is not promulgated as a final rule, the proposed requirement for a second radar would be reinstated.

Section 164.39 in the proposal. This proposed section would have required an illuminated rate of turn indicator on vessels of 35,000 gross tons or more. Two commenters stated that the device was not necessary on vessels of 100,000 gross tons or more. One commenter stated that the device was designed for use on rivers and was not appropriate for seagoing vessels. One commenter stated that the device had been insufficiently accurate when used on several of his vessels. The Coast Guard has determined that, although the rate of turn indicator may be useful on vessels of this size, further study is necessary and there is insufficient basis for requiring it in these rules.

Section 164.51 Deviatio s from rules: emergency. This section allows emergency deviations from these rules to avoid endangering persons, property, or the environment. Five commenters stated that this section only repeats the substance of Rule 29 of the International Regulations for Preventing Collisions at Sea, 1960, and Article 29 of the statutory inland "rules of the road" (33 U.S.C. 221). Although this section is consistent with those provisions, it applies specifically to the rules in this new part and not just to general navigation practices governed by the international regulations and inland "rules of the road." Proposed paragraph (b) of this section would have required a report of any deviation under this section to the Captain of the Port or Coast Guard District Commander. Two commenters stated this is unnecessary for brief emergency deviations. In light of these comments, the final rule is changed to require this report for only the failure of critical navigation equipment: the radar, gyrocompass, echo sounding device, or primary steering gear. This requirement is in paragraph (b) of new § 164.53. Paragraph (a) of this new section allows the person directing the movement of the vessel to continue a voyage if any equipment required by this new part stops operating properly, subject to the directions of the Captain of the Port under Part 160 of this chapter.

Section 164.55 Deviations from rules: continuing operation or period of time. This was § 164.53 in the proposal. Under this section, the Captain of the Port may authorize a deviation from these rules, if safe navigation is not impaired or the rules for preventing collisions at sea are not violated, for a vessel operating in the waters under his jurisdiction, for a continuing operation or for a period of time that he specifies. Two commenters stated that there would be "uneven enforcement" because Captains of the Port may interpret the rules differently. One commenter suggested that the section include a requirement that authorizations not be "unreasonably withheld." Another commenter suggested an internal procedure for informing Captains of the Port of the different deviations that have been authorized. The Coast Guard intends to issue internal guidelines so that this deviation authorization would be as consistent as is practicable. The intent of this section is to allow reasonable deviations from these rules if safe navigation of the vessel is not impaired and the rules for preventing collisions at sea are not violated. If a vessel operates in waters that include the jurisdiction of two or more Captains of the Port, an authorization from each is necessary. Deviation from the rules because of equipment failure on a particular voyage is covered under new § 164.53(a).

Section 164.61 Marine Casualty record retentio. Two commenters stated that this requirement for record retention when a vessel is involved in a marine casualty is unreasonable. One commenter stated that the requirement is already included in 46 CFR. This section cross refere ces the record retention requirement in 46 CFR 4.05–15 for the convenience of those persons using these rules, which will be in 33 CFR. That requirement in Title 46 is necessary for the purposes of the marine casualty investigations that the Coast Guard is required to conduct.

This rule has been reviewed for economic effects under Department of Transportation "Policies to Improve Analysis and Review of Regulations" (41 FR 16200). Because the operational rules in this new part are followed already on most vessels and can be met with most existing manning levels, there should be no cost increase due to increased manning. The Coast Guard estimates that there should be no more than 1,100 U.S. flag vessels and 5,000 foreign flag vessels of 1,600 or more gross tons navigating in the navigable waters of the United States in any year. The following is based, in part, on a 1975 random survey of 300 vessels. Where appropriate, annual cost is based upon a 10 year amortization period. All of the vessels had radar. Adding a good marine radar to 5% of the 6,100 vessels for approximately $15,000 each would result in a cost of $1,282,500 in the first year and $457,500 in each of the following nine years. All the vessels had a magnetic compass. Adding the compass to 5% of the 6,100 vessels for $2,000 each would result in a cost of $496,000 in the first year and $61,000 in each of the following nine years. One vessel did not have a rudder angle indicator. Adding this indicator to 5% of the 6,100 vessels for approximately $4,000 each would result in a cost of $342,000 for the first year and $122,000 in each of the following nine years. Two vessels did not have a gyrocompass. Adding a gyrocompass to 10% of the 6,100 vessels for approximately $60,000 each would result in a cost of $10,260,000 in the first year and $3,660,000 in each of the following nine years. One hundred and seventy-nine vessels did not have their maneuvering characteristics posted. All U.S. vessels, approximately 1,100, are required to have it posted. If all 5,000 foreign vessels did not have it posted, testing for the information would cost approximately $5,000 each resulting in an amortized cost of $2,500,000 each year for ten years. Two vessels did not have a recording fathometer. Adding the fathometer to 10% of the vessels for $20,000 each would result in a cost of $2,420,000 in the first year and $1,000,000 in each of the following nine years.

The economic impact on the U.S. economy from U.S. vessels is the total cost of compliance in the first year plus 10% passed to the consumer in each of the ten years. The cost of foreign vessel compliance will be passed to the U.S. consumer evenly over the 10 year amortization period. The estimated first year cost from compliance to the U.S. shipping industry is $6,979,500. The estimated cost to the U.S. economy is $17,300,500 in the first year and $7,800,500 in each of the following nine years. The benefits from having this equipment and following the proper operating procedures would result not only in tangible savings, including less vessel damage or loss, less post vessel casualty costs, including investigation costs, and search and rescue costs, and less pollution clean up costs of which spill clean up costs alone are estimated at $30,000,000 to $35,000,000 per year, but significant intangible benefits, including less loss of life or injury, less pollution and resulting harm to the environment, and less hazards to navigation caused by abandoned vessels.

In consideration of the foregoing, Chapter I of Title 33, Code of Federal Regulations, is amended by adding a new Part 164 to read as follows:

Sec.

164.01 Applicability.
164.11 Navigation underway: general.
164.15 Navigation underway: confined or congested waters.
164.16 List of confined or congested waters.
164.19 Requirements for vessels at anchor.
164.25 Tests before entering or getting underway.
164.30 Charts, publications, and equipment: general.
164.33 Charts and publications.
164.35 Equipment: all vessels.
164.51 Deviation from rules: emergency.
164.53 Deviations from rules and reporting: non-operating equipment.
164.55 Deviations from rules: continuing operation or period of time.
164.61 Marine casualty reporting and record retention.

AUTHORITY: Sec. 104, 86 Stat. 427 (33 U.S.C. 1224); 49 CFR 1.46 (m) and (n)(4).

§ 164.01 Applicability.

This part applies to each self-propelled vessel of 1600 or more gross tons when

it is operating in or on the navigable waters of the United States, except the Panama Canal and the St. Lawrence Seaway.

§ 164.11 Navigation underway: general.

The owner, master, or person in charge of each vessel underway shall ensure that:

(a) The wheelhouse is constantly manned by persons who—

(1) Direct and control the movement of the vessel; and

(2) Fix the vessel's position;

(b) Each person performing a duty described in paragraph (a) of this section is competent to perform that duty;

(c) The position of the vessel at each fix is plotted on a chart of the area and the person directing the movement of the vessel is informed of the vessel's position.

(d) Electronic and other navigational equipment, external fixed aids to navigation, geographic reference points, and hydrographic contours are used when fixing the vessel's position;

(e) Buoys alone are not used to fix the vessel's position;

NOTE.—Buoys are aids to navigation placed in approximate positions to alert the mariner to hazards to navigation or to indicate the orientation of a channel. Bouys may not maintain an exact position because strong or varying currents, heavy seas, ice, and collisions with vessels can move or sink them or set them adrift. Although buoys may corroborate a position fixed by other means, buoys cannot be used to fix a position; however, if no other aids are available, buoys alone may be used to establish an estimated position.

(f) The danger of each closing visual or each closing radar contact is evaluated and the person directing the movement of the vessel knows the evaluation;

(g) Rudder orders are executed as given;

(h) Engine speed and direction orders are executed as given;

(i) Magnetic variation and deviation and gyrocompass errors are known and correctly applied by the person directing the movement of the vessel;

(j) A person whom he has determined is competent to steer the vessel is in the wheelhouse at all times; [1]

(k) If a pilot other than a member of the vessel's crew is employed, the pilot is informed of the draft, maneuvering characteristics, and pecularities of the vessel and of any abnormal circumstances on the vessel that may affect its safe navigation;

(l) Current velocity and direction for the area to be transited are known by the person directing the movement of the vessel;

(m) Predicted set and drift are known by the person directing movement of the vessel;

(n) Tidal state for the area to be transited is known by the person directing movement of the vessel;

(o) The vessel's anchors are ready for letting go;

(p) The person directing the movement of the vessel sets the vessel's speed with consideration for—

(1) The prevailing visibility and weather conditions;

(2) The proximity of the vessel to fixed shore and marine structures;

(3) The tendency of the vessel underway to squat and suffer impairment of maneuverability when there is small underkeel clearance;

(4) The comparative proportions of the vessel and the channel;

(5) The density of marine traffic;

(6) The damage that might be caused by the vessel's wake;

(7) The strength and direction of the current; and

(8) Any local vessel speed limit;

(q) The tests required by § 164.25 are made and recorded in the vessel's log; and

(r) The equipment required by this part is maintained in operable condition.

§ 164.15 Navigation underway: confined or congested waters.

In the confined or congested waters described in § 164.16, the master or person in charge of each vessel underway shall ensure that—

(a) Propulsion machinery can respond immediately through its full operating range;

(b) The engine room, including the main engine control station even if it is not in the engine room, is manned to operate the propulsion machinery as required by paragraph (a) of this section;

(c) Persons are available to rapidly anchor the vessel in an emergency; and

(d) The automatic pilot device is not in use.

§ 164.16 List of confined or congested waters. [Reserved]

§ 164.19 Requirements for vessels at anchor.

The master or person in charge of each vessel that is anchored shall ensure that—

(a) A proper anchor watch is maintained;

(b) Procedures are followed to detect a dragging anchor; and

(c) Whenever weather, tide, or current conditions are likely to cause the vessel's anchor to drag, action is taken to ensure the safety of the vessel, structures, and other vessels, such as being ready to veer chain, let go a second anchor, or get underway using the vessel's own propulsion or tug assistance.

§ 164.25 Tests before entering or getting underway.

No person may cause a vessel to enter into or get underway on the navigable waters of the United States unless, no more than 12 hours before entering or getting underway, the following equipment has been tested:

(a) Primary and secondary steering gear.

(b) All internal vessel control communications and vessel control alarms.

(c) Standby or emergency generator for as long as necessary to show proper functioning, including steady state temperature and pressure readings.

(d) Storage batteries for emergency lighting and power systems in vessel control and propulsion machinery spaces.

(e) Main propulsion machinery, ahead and astern.

§ 164.30 Charts, publications, and equipment: general.

No person may operate or cause the operation of a vessel unless the vessel has the charts, publications, and equipment as required by §§ 164.33 through 164.35 of this part.

§ 164.33 Charts and publications.

(a) Each vessel must have the following:

(1) Except as provided by paragraph (b) of this section, charts of the area to be transited published by the National Ocean Survey, U.S. Army Corps of Engineers, or a river authority that—

(i) are of a large enough scale and have enough detail to enable safe navigation of the area; and

(ii) are the most recently published and available for the area and currently corrected.

(2) Except as provided by paragraph (b) of this section, the most recent, available, and currently corrected copy of, or applicable extract from, each of the following publications, if it includes the area to be transited:

(i) U.S. Coast Pilot.

(ii) Coast Guard Light List.

(iii) Notices to Mariners published by Defense Mapping Agency Hydrographic Center and local Coast Guard Notice to Mariners.

(iv) Tide Tables published by the National Ocean Survey.

(v) Tidal Current Tables published by the National Ocean Survey, or river current publication issued by the U.S. Army, Corps of Engineers, or a river authority.

(b) A vessel may have a chart or publication published by a foreign government instead of a chart or publication required by this section if the chart or publication contains similar information to the U.S. Government publication or chart. A vessel bound from a foreign port to a port in the United States may have the latest charts and publications that were available at previous ports of call.

§ 164.35 Equipment: all vessels.

Each vessel must have the following:

(a) A marine radar system for surface navigation.

(b) An illuminated magnetic steering compass, mounted in a binnacle, that can be read at the vessel's main steering stand.

(c) A current magnetic compass deviation table or graph or compass comparison record for the steering compass, in the wheelhouse.

(d) A gyrocompass.

(e) An illuminated repeater for the gyrocompass required by paragraph (d) of this section that is at the main steering stand, unless that gyrocompass is il-

[1] See also 46 U.S.C. 672, which requires an able seaman at the wheel on U.S. vessels of 100 gross tons or more in narrow or crowded waters or during low visibility.

luminated and is at the main steering stand.

(f) An illuminated rudder angle indicator in the wheelhouse.

(g) The following maneuvering information prominently displayed on a fact sheet in the wheelhouse:

(1) For full and half speed, a turning circle diagram to port and starboard that shows the time and the distance of advance and transfer required to alter the course 90 degrees with maximum rudder angle and constant power settings.

(2) The time and distance to stop the vessel from full and half speed while maintaining approximately the initial heading with minimum application of rudder.

(3) For each vessel with a fixed propeller, a table of shaft revolutions per minute for a representative range of speeds.

(4) For each vessel with a controllable pitch propeller, a table of control settings for a representative range of speeds.

(5) For each vessel that is fitted with an auxiliary device to assist in maneuvering, such as a bow thruster, a table of vessel speeds at which the auxiliary device is effective in maneuvering the vessel.

(6) The maneuvering information for the normal load and normal ballast condition for—

(i) Calm weather—wind 10 knots or less, calm sea;

(ii) No current;

(iii) Deep water conditions—water depth twice the vessel's draft or greater; and

(iv) Clean hull.

(7) At the bottom of the fact sheet, the following statement:

WARNING

The response of the (name of the vessel) may be different from that listed above if any of the following conditions, upon which the maneuvering information is based, are varied:

(1) Calm weather—wind 10 knots or less, calm sea;

(2) No current;

(3) Water depth twice the vessel's draft or greater;

(4) Clean hull; and

(5) Intermediate drafts or unusual trim.

(h) An echo depth sounding device.

(i) A device that can continuously record the depth readings of the vessel's echo depth sounding device.

(j) Equipment on the bridge for plotting relative motion.

§ 164.51 Deviations from rules: emergency.

Except for the requirements of § 164.53 (b), in an emergency, any person may deviate from any rule in this part to the extent necessary to avoid endangering persons, property, or the environment.

§ 164.53 Deviations from rules and reporting: non-operating equipment.

(a) If during a voyage any equipment required by this part stops operating properly, the person directing the movement of the vessel may complete the voyage subject to the requirements in Part 160 of this chapter.

(b) If the vessel's radar, gyrocompass, echo depth sounding device, or primary steering gear stops operating properly, the person directing the movement of the vessel must report or cause to be reported that it is not operating properly to the nearest Captain of the Port or Coast Guard District Commander as soon as possible.

§ 164.55 Deviations from rules: continuing operation or period of time.

The Captain of the Port, upon written application, may authorize a deviation from any rule in this part if he determines that the deviation does not impair the safe navigation of the vessel under anticipated conditions and will not result in a violation of the rules for preventing collisions at sea. The authorization may be issued for vessels operating in the waters under the jurisdiction of the Captain of the Port for any continuing operation or period of time the Captain of the Port specifies.

§ 164.61 Marine casualty reporting and record retention.

When a vessel is involved in a marine casualty as defined in 46 CFR 4.03-1, the master or person in charge of the vessel shall—

(a) Ensure compliance with 46 CFR Subpart 4.05, "Notice of Marine Casualty and Voyage Records;" and

(b) Ensure that the voyage records required by 46 CFR 4.05-15 are retained for—

(1) 30 days after the casualty if the vessel remains in the navigable waters of the United States; or

(2) 30 days after the return of the vessel to a United States port if the vessel departs the navigable waters of the United States within 30 days after the marine casualty.

Effective date: This rule becomes effective on June 1, 1977.

The Coast Guard has determined that this document does not contain a major proposal requiring preparation of an Inflation Impact Statement under Executive Order 11821 and OMB Circular A-107.

Dated: January 26, 1977.

O. W. SILER,
Admiral, U.S. Coast Guard Commandant.

[FR Doc.77-2994 Filed 1-28-77;8:45 am]

Title 46—Shipping

CHAPTER I—COAST GUARD, DEPARTMENT OF TRANSPORTATION

[CGD 75-074]

Vessel Inspection Regulations

On September 16, 1975, a document was published in the FEDERAL REGISTER (40 FR 24585) proposing to amend the vessel inspection regulations in Chapter I of Title 46 of the Code of Federal Regulations. Interested parties were given an opportunity to submit, not later than October 31, 1975, data, views and recommendations regarding the proposed amendments. These regulations are interrelated with and therefore must be read together with the Navigation Safety Regulations (33 CFR 164) published in this FEDERAL REGISTER.

Several comments were received in response to this proposal. One commentor felt that the proposed rules concerning nautical publications should apply only to vessels on the high seas and international waters and should not apply to tankships operating exclusively on bays, sounds, and lakes other than the Great Lakes. Current rules require that these vessels meet the same navigation requirements as other tankships in ocean, coastwise, and Great Lakes service. There are sufficient hazards to safe navigation in all waters to warrant the required carriage of nautical publications for the intended voyage in addition to the presently required charts. For this reason, the comment has not been adopted.

One commentor expressed concern about the effect of the proposed rules regarding radar, gyrocompass, and radio directional finders on vessels solely navigating the Great Lakes. The requirements of these regulations for radar and gyrocompasses apply only to vessels operating in ocean or coastwise service and are not applicable to vessels navigating solely on the Great Lakes. However, the regulations in 33 CFR Part 164, which require radar and gyrocompasses, apply to vessels navigating on the Great Lakes. The proposed rules did not address radio directional finders. The Coast Guard did not intend to extend the requirements for radar, magnetic compasses, and gyrocompasses to barges. This was not clear in the proposed regulations. To clarify this, the following changes are made in the final regulations. The words "mechanically propelled" are added to §§ 77.09-1(a), 77.11-1 (a) and (b), 96.17-1 (a) and (b), 96.25-1(a), 167.40-40(a), 167.40-45 (a) and (b), 195.17(a), 195.19-1 (a) and (b), as appropriate. One commentor suggested that the term "helmsman" could be interpreted as limited to a specific position rather than a specific function and suggested the use of the term "qualified person". The Coast Guard agrees that the term "helmsman" could possibly be misinterpreted as the commentor suggested. For this reason, the term "qualified helmsman" has been changed to "competent person".

The references to Federal Communications Commission regulations for radar have been deleted to make these regulations consistent with the Navigation Safety Regulations in 33 CFR Part 164 which require marine radars.

In consideration of the foregoing, Chapter I of Title 46 of the Code of Federal Regulations is amended as follows:

PART 32—SPECIAL EQUIPMENT MACHINERY AND HULL REQUIREMENTS

§ 32.15-10 [Amended]

1. In 32.15-10, by deleting the words "mechanical or" in the first sentence.

2. By adding a new sentence at the end of § 32.15-20(a) to read as follows:

§ 32.15–20 Radiotelegraph and Radiotelephone—T/ALL.

(a) * * * All vessels on an international voyage that are required to carry a radiotelegraph or radiotelephone in accordance with Chapter IV of the Safety of Life at Sea Convention, 1960, must carry the International Code of Signals.

3. By adding a new § 32.15–30 to read as follows:

§ 32.15–30 Radar—T/OC.

All tankships of 1,600 gross tons and over in ocean or coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

4. By adding a new § 32.15–35 to read as follows:

§ 32.15–35 Magnetic Compass and Gyrocompass—T/OC.

(a) All tankships in ocean or coastwise service must be fitted with a magnetic compass.

(b) All tankships of 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each tankship must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

PART 35—OPERATIONS

5. By revising § 35.20–1(d) to read as follows:

§ 35.20–1 Notice to Mariners; aids to navigation—T/OCLB.

* * * * *

(d) As appropriate for the intended voyage, all vessels must carry adequate and up-to-date—

(1) Charts;
(2) Sailing directions;
(3) Coast pilots;
(4) Light lists;
(5) Notices to mariners;
(6) Tide tables;
(7) Current tables; and
(8) All other nautical publications necessary.[1]

6. By adding a new § 35.20–45 to read as follows:

§ 35.20–45 Use of Auto Pilot—T/ALL.

Except as provided in 33 CFR 164.15, when the automatic pilot is used in—

(a) Areas of high traffic density;
(b) Conditions of restricted visibility; and
(c) All other hazardous navigational situations, the master shall ensure that—
(1) It is possible to immediately establish manual control of the ship's steering;
(2) A competent person is ready at all times to take over steering control; and
(3) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the officer of the watch.

7. By revising the first sentence of § 35.30–20 to read as follows:

§ 35.30–20 Emergency Equipment—TB/ALL.

(a) Two emergency outfits, stored for use in widely separated, accessibe locations, are required for the following:

* * * * *

PART 77—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

8. By adding a new Subpart 77.09 to read as follows:

Subpart 77.09—Radar

§ 77.09–1 When required.

All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

9. By adding a new Subpart 77.11 to read as follows:

Subpart 77.11—Magnetic Compass and Gyrocompass

§ 77.11–1 When required.

(a) All mechanically propelled vessels in ocean, coastwise or Great Lakes service must be fitted with a magnetic compass.

(b) All mechanically propelled vessels 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each vessel must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

10. By adding a new paragraph (b) to § 77.13–1 to read as follows:

Subpart 77.13—Radiotelegraph and Radiotelephone

§ 77.13–1 Required by Federal Communications Commission.

* * * * *

(b) All vessels on an international voyage which are required to carry a radiotelegraph or radiotelephone installation in accordance with Chapter IV of the Safety of Life at Sea Convention, 1960, must carry the International Code of Signals.

§ 77.27–1 [Amended]

11. In 77.27–1, by deleting the words "mechanical or" from the first sentence.

PART 78—OPERATIONS

12. By revising § 78.05–5 to read as follows:

§ 78.05–5 Charts and Nautical Publications.

As appropriate for the intended voyage, all vessels except barges, ferryboats and vessels operating exclusively on rivers, must carry adequate and up-to-date—

(a) Charts;
(b) Sailing directions;
(c) Coast pilots;
(d) Light lists;
(e) Notices to mariners;
(f) Tide tables;
(g) Current tables; and
(h) All other nautical publications necessary.[1]

13. By adding a new Subpart 78.19 to read as follows:

Subpart 78.19—Auto Pilot

§ 78.19–1 Use of Auto Pilot.

Except as provided in 33 CFR 164.15, when the automatic pilot is used in—

(a) Areas of high traffic density;
(b) Conditions of restricted visibility; and
(c) All other hazardous navigational situations, the master shall ensure that—
(1) It is possible to immediately establish manual control of the ship's steering;
(2) A competent person is ready at all times to take over steering control; and
(3) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the officer of the watch.

PART 96—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

14. By adding a new paragraph (b) to § 96.13–1 to read as follows:

Subpart 96.13—Radiotelegraph and Radiotelephone

§ 96.13–1 Required by Federal Communications Commission.

* * * * *

(b) All vessels on an international voyage which are required to carry a radiotelegraph or radiotelephone installation in accordance with Chapter IV of the Safety of Life at Sea Convention, 1960, must carry the International Code of Signals.

15. By adding a new Subpart 96.17 to read as follows:

Subpart 96.17—Magnetic Compass and Gyrocompass

§ 96.17–1 When required.

(a) All mechanically propelled vessels in ocean or coastwise service must be fitted with a magnetic compass.

(b) All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each vessel must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

16. By adding a new Subpart 96.25 to read as follows:

[1] For United States vessels in or on the navigable waters of the United States, see 33 CFR 164.33.

[1] For United States vessels in or on the navigable waters of the United States, see 33 CFR 164.33.

Subpart 96.25—Radar

§ 96.25–1 When required.

All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

§ 96.27–1 [Amended]

17. In 96.27–1, by deleting the words "mechanical or" in the first sentence of paragraph (a).

18. By revising § 96.35–15 to read as follows:

§ 96.35–15 Stowage.

The fireman's outfits must be stored in widely separated, accessible locations.

PART 97—OPERATIONS

19. By revising § 97.05–5(a) to read as follows:

§ 97.05–5 Charts and nautical publications.

As appropriate for the intended voyage, all vessels except barges, vessels operating exclusively on rivers, and motorboats other than those certificated for ocean or coastwise route, must carry adequate and up-to-date—

(a) Charts;
(b) Sailing directions;
(c) Coast pilots;
(d) Light lists;
(e) Notices to mariners;
(f) Tide tables;
(g) Current tables; and
(h) All other nautical publications necessary.[1]

20. By adding a new Subpart 97.16 to read as follows:

Subpart 97.16—Auto Pilot

§ 97.16–1 Use of auto pilot.

Except as provided in 33 CFR 164.15, when the automatic pilot is used in—

(a) Areas of high traffic density;
(b) Conditions of restricted visibility; and
(c) All other hazardous navigational situations, the master shall ensure that—

(1) It is possible to immediately establish manual control of the ship's steering;

(2) A competent person is ready at all times to take over steering control;

(3) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the officer of the watch.

PART 167—PUBLIC NAUTICAL SCHOOL SHIPS

§ 167.40–20 [Amended]

21. In § 167.40–20, by deleting the words "mechanical or" from the first and second sentences.

22. By adding a new § 167.40–40 to read as follows:

§ 167.40–40 Radar.

All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

23. By adding a new § 167.40–45 to read as follows:

§ 167.40–45 Magnetic compass and gyrocompass.

(a) All mechanically propelled vessels in ocean or coastwise service must be fitted with a magnetic compass.

(b) All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each vessel must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

24. By adding a new § 167.65–35 to read as follows:

§ 167.65–35 Use of auto pilot.

Except as provided in 33 CFR 164.15, when the automatic pilot is used in—

(a) Areas of high traffic density;
(b) Conditions of restricted visibility; and
(c) All other hazardous navigational situations, the master shall ensure that—

(1) It is possible to immediately establish human control of the ship's steering;

(2) A competent person is ready at all times to take over steering control; and

(3) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the officer of the watch.

25. By revising § 167.65–45(d) to read as follows:

§167.65–45 Notice to mariners; aids to navigation.

* * * * *

(d) As appropriate for the intended voyage, all nautical school ships must carry adequate and up-to-date—

(1) Charts;
(2) Sailing directions;
(3) Coast pilots;
(4) Light lists;
(5) Notices to mariners;
(6) Tide tables;
(7) Current tables; and
(8) All other nautical publications necessary.[1]

PART 184—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

26. By adding a new paragraph (c) to § 184.25–1 to read as follows:

Subpart 184.25—Radio

§ 184.25–1 Requirements of the Federal Communications Commission.

* * * * *

(c) All vessels on an international voyages which are required to carry a radiotelegraph or radiotelephone installation in accordance with Chapter IV of the Safety of Life at Sea Convention, 1960, must carry the International Code of Signals.

PART 185—OPERATIONS

27. By adding a new § 185.20–30 to read as follows:

Subpart 185.20—Miscellaneous Operating Requirements

§ 185.20–30 Use of auto pilot.

Except as provided in 33 CFR 164.15, when the automatic pilot is used in—

(a) Areas of high traffic density;
(b) Conditions of restricted visibility; and
(c) All other hazardous navigational situations, the operator shall ensure that—

(1) It is possible to immediately establish manual control of the ship's steering;

(2) That a competent person is ready at all times to take over steering control; and

(3) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the operator.

28. By adding a new § 185.20–35 to read as follows:

Subpart 185.20—Miscellaneous Operating Requirements

§ 185.20–35 Charts and nautical publications.

As appropriate for the intended voyage, all vessels must carry adequate and up-to-date—

(a) Charts;
(b) Sailing directions;
(c) Coast pilots;
(d) Light lists;
(e) Notices to mariners;
(f) Tide tables;
(g) Current tables; and
(h) All other nautical publications necessary.[1]

PART 195—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

29. By adding a new paragraph (b) to § 195.13–1 to read as follows:

Subpart 195.13—Radiotelegraph and Radiotelephone

§ 195.13–1 Required by Federal Communications Commission.

* * * * *

(b) All mechanically propelled vessels on an international voyage which are required to carry a radiotelegraph or radio telephone installation in accordance with Chapter IV of the Safety of Life at Sea Convention, 1960, must carry the International Code of Signals.

30. By adding a new Subpart 195.17 to read as follows:

[1] For United States vessels in or on the navigable waters of the United States, see CFR 164.33.

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Subpart 195.17—Radar

§ 195.17–1 When required.

All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

31. By adding a new Subpart 195.19 to read as follows:

Subpart 195.19—Magnetic Compass and Gyrocompass

§ 195.19–1 When required.

(a) All mechanically propelled vessels in ocean or coastwise service must be fitted with a magnetic compass.

(b) All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each vessel must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

§ 195.27–1 [Amended]

32. In 195.27–1, by deleting the words "mechanical or" in the first sentence.

33. By adding a new sentence at the end of § 195.35–10(b) to read as follows:

§ 195.35–10 Fireman's outfit.

* * * * * * *

(b) * * * The fireman's outfits must be stored in widely separated, accessible locations.

PART 196—OPERATIONS

34. By revising § 196.05–5 to read as follows:

§ 196.05–5 Charts and nautical publications.

As appropriate for the intended voyage, all vessels except barges, and vessels operating exclusively on rivers, must carry adequate and up-to-date—

(a) Charts;
(b) Sailing directions;
(c) Coast pilots;
(d) Light lists;
(e) Notices to mariners;
(f) Tide tables;
(g) Current tables; and
(h) All other nautical publications necessary.[1]

(46 U.S.C. 375, 416, 49 U.S.C. 1655(b)(1); 49 CFR 1.46(b))

Effective date: These amendments are effective on June 1, 1977.

The Coast Guard has determined that this document does not contain a major proposal requiring preparation of an Inflation Impact Statement under Executive Order 11821 and OMB Circular A–107.

Dated: January 26, 1977.

O. W. SILER,
Admiral, U.S. Coast Guard,
Commandant.

[FR Doc.77–2995 Filed 1–28–77;8:45 am]

[1] For United States vessels in or on the navigable waters of the United States, see 33 CFR 164.33.

DEPARTMENT OF TRANSPORTATION

Coast Guard

[33 CFR Part 164]

[CGD 77-002]

PROPOSED NAVIGATION SAFETY REQUIREMENTS

LORAN-C on Vessels of 1600 Gross Tons or More

• *Purpose.* The Coast Guard is considering amending the navigation safety requirements by adding LORAN-C to the list of required equipment for vessels of 1600 gross tons or more. •

Written comments. Interested persons are invited to participate in this proposed rulemaking by submitting written data, views, or arguments to the Commandant (G-CMC/81), U.S. Coast Guard, Washington, D.C., 20590. Each person submitting a comment should include his name and address, identify this notice (CGD 77-002), and give reasons for support of his comment. Comments received before April 1, 1977 will be considered before final action is taken on this proposal. Copies of all written comments received will be available for examination by interested persons in Room 8117, Department of Transportation, Nassif Building, 400 Seventh Street, S.W., Washington, D.C. The proposal may be changed in light of the comments received.

Public Hearing. The Coast Guard will hold a public hearing on March 4, 1977, beginning at 10:00 a.m., in Room 2232, Department of Transportation, Nassif Building, 400 Seventh Street, S.W., Washington, D.C. An additional public hearing will be held on March 16, 1977, beginning at 9:30 a.m., in the Marine Room, Travel Lodge at The Wharf, 250 Beach Street, San Francisco, California. Interested persons are invited to attend the hearing and present oral or written statements on this proposal. It is requested that anyone desiring to make oral comments at either hearing notify the Commandant (G-CMC/81), U.S. Coast Guard, Washington, D.C. 20590, at least 10 days before the scheduled date of the public hearing and specify the approximate length of time needed for the presentation. It is urged that a written summary or copy of the oral presentation be included with the request.

Summary of Proposal. New Navigation Safety Regulations (Part 164) are being published on page 5956 of this issue of the FEDERAL REGISTER. When the Navigation Safety Regulations were proposed in the May 6, 1976, issue of the FEDERAL REGISTER (41 FR 18766), the Coast Guard stated that the purposes of the rules would be to prevent vessel collisions and groundings and protect the navigable waters from environmental harm resulting from vessel collisions and groundings. The Coast Guard noted a concern about some vessels that do not currently approach an appropriate level of navigation practice and equipment. That concern has been intensified by recent tanker groundings. Some of these might not have occurred if the vessels involved had been making use of the best navigational tools available.

The Department of Transportation maintains a National Plan for Navigation. It is the official source of navigation policy and plans for the Department. The April, 1972, edition of the National Plan for Navigation was amended by an Annex published as a Notice in the July 19, 1974, issue of the FEDERAL REGISTER (39 FR 26468). The amendment announced the designation and implementation of LORAN-C as the government-provided radionavigation system for the U.S. maritime coastal confluence zone. The coastal confluence zone is defined as the seaward approaches to land, the inner boundary of which is the harbor entrance, and the outer boundary of which is 50 nautical miles offshore or the edge of the continental shelf (100 fathom curve), whichever is greater.

The July, 1974, Annex describes in detail how LORAN-C was selected after consideration of the alternative systems, LORAN-A, Differential Omega, and Decca.

The LORAN-C service in the coastal confluence zone is designed to provide 95% assurance that a vessel can fix its position to an accuracy of ¼ mile. The navigation system accuracy requirement has been established so that a vessel could be navigated safely along a track to its destination or within its designated shipping lane.

The existing LORAN-C system is being expanded to provide coverage for the entire U.S. coastal confluence zone and the Great Lakes. Overseas stations will continue to be operated by the Coast Guard in response to the requirements of the Department of Defense. Existing system coverage and new Pacific Coast service, which will become available by mid-1977, is depicted in the LORAN-C Coverage Diagram, Defense Mapping Agency Hydrographic Center Chart No. 5130. Basically, LORAN-C presently provides ¼ nautical mile accuracy over about two-thirds of the U.S. East Coast waters, throughout the Bering Sea, and in parts of the Hawaiian Islands and surrounding waters.

The expanded system is to provide coverage, with a fix accuracy of ¼ nautical mile or better, throughout the Great Lakes and in all U.S. coastal waters (out to 200 miles or more) except northern Alaskan waters and some Hawaiian areas. Scheduled dates for the availability of expanded service are approximately:

West Coast	Spring, 1977
Gulf of Alaska	Spring, 1977
East Coast	Expanded service: Summer, 1978.
East Coast	Complete service: Summer, 1979.
Gulf of Mexico	Summer, 1978
Great Lakes	Early 1980

Since, as of Spring 1977, LORAN-C will provide coverage of a major fraction of the coastal confluence zone, since the system is programmed for future expansion, and since there is a need to upgrade the ability of vessels entering the navigable waters of the U.S. to be informed accurately and continuously of their progress along a track, the Coast Guard has concluded that the use of LORAN-C should be a requirement for certain vessels entering U.S. waters. While this rule, of course, only applies on the navigable waters of the United States, the Coast Guard feels that operators of vessels with LORAN-C receivers installed will avail themselves of the benefits of the system in the offshore approaches, as well as in the overseas coverage areas. An incidental benefit will be the ability to navigate with greater confidence through areas of outer continental shelf resource exploration and production.

The Coast Guard randomly sampled navigation practice and equipment in mid-1975. Of the vessels boarded, 40% were equipped with LORAN-C receivers. Vessels under U.S. flag comprised 21% of the sample; 70% of these were equipped with LORAN-C. This 70% figure included both tankers and freighters. With respect to vessels sailing under foreign flag, 39% of foreign freighters were equipped with LORAN-C, and only 24% of foreign tankers were so equipped. Considering the reasonable marketing costs of receivers, it would not appear that adequate use is being made of this navigational aid.

While the Coast Guard proposes to require LORAN-C receivers on all vessels of 1600 or more gross tons that enter U.S. waters, it recognizes that a requirement of this nature would place a sudden surge on manufacturers' capabilities and would cause a severe backlog problem for those manufacturers. Accordingly, the Coast Guard proposes that if the amendment is adopted, it will become effective for each category of vessel at a staggered interval. Because the tank vessel segment of the industry is somewhat smaller than the freighter segment, and because the ability to accurately navigate tankers has assumed much greater importance of late, it is proposed that this segment of the industry would be required to comply with the regulation at the earliest time, such as 120 days after publication of the rule. It is proposed to require the remaining vessels to comply one year after publication of the rule.

In consideration of the foregoing, it is proposed to revise § 164.35 of Title 33, Code of Federal Regulations, by adding a new paragraph (k) to read as follows:

§ 164.35 Equipment: all vessels.

* * * * *

(k) A LORAN-C receiver.

(Sec. 104, 86 Stat. 427 (33 U.S.C. 1224); sec. 201(3), 86 Stat. 428, as amended (46 U.S.C. 391a(3)); 49 CFR 1.46 (n)(4).)

The Coast Guard has determined that this document does not contain a major rule requiring preparation of an Inflation Impact Statement under Executive Order 11821 and OMB Circular A-107.

Dated: January 26, 1977.

A. F. FUGARO,
Rear Admiral, U.S. Coast Guard Chief, Office of Marine Environment and Systems.

[FR Doc.77-2996 Filed 1-28-77;8:45 am]